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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/242,096	05/26/1999	MICHAEL J. KEMP	R0346/7016	9589

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EXAMINER	
PENDLETON, BRIAN T	
ART UNIT	PAPER NUMBER
2644	

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/242,096	KEMP, MICHAEL J.	
	Examiner	Art Unit	
	Brian T. Pendleton	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) *21 and 22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 2/19/02 have been fully considered but they are not persuasive.

The rejection to independent claims 1 and 10 are based on the reference Kuroki et al, US Patent 5,841,875. Page 3 of Applicant's response alleges that claim 1 requires applying a selected impulse response to an input signal to derive an output signal, which is not disclosed nor suggested by Kuroki et al. Examiner disagrees with that allegation. Kuroki et al disclose an apparatus which adds harmonic components to an input signal. The amplitude of the input signal is used in determining the output signal. While Kuroki et al do not explicitly state that an impulse response is selected and applied to the input signal, that feature is inherent to the apparatus. The apparatus uses a memory containing a mapping table. The mapping table defines a function which is to be applied to an input leading to an output. That was illustrated in figures 3(c), 4(c), 5(c), etc. Applying an impulse response to an input signal to generate an output signal is no different from mapping an input signal to an output signal. A mapping function is equivalent to an impulse response. Page 4 alleges that claim 10 is not anticipated by Kuroki et al for the same reasons laid forth on page 3. Using the same premise that a mapping function is equivalent to and defines an impulse response, Examiner disagrees with Applicant.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-7, 9-16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuroki et al, US Patent 5,841,875. Kuroki et al disclose a digital audio signal processor with harmonics modification comprising a digital input x, signal processor 2, memory 6 and interpolator 13. As discussed in column 4 lines 7 – 67, there are stored amplitude values in memory 6 (per claims 2 and 11) which are retrieved based on the amplitude of input signal x (per claims 3, 12). Since new amplitude values are retrieved in order to create harmonics, there is a transfer function between the input and output signals. Thus, retrieving new amplitude values represents selecting impulse responses to convolve with the input signals. Claims 1 and 10 are met. Regarding claims 4-7 and 13-16, Kuroki et al disclose an interpolator 13. Interpolators inherently determine whether an input value is above or below a threshold and accordingly apply two functions (in proportions which sum to 1) to the input value to determine an output value. The instant claims read on a general interpolator. Per claims 9 and 18, amplitude is time dependent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroki et al in view of Shimizu, US Patent 6,005,949. Kuroki et al disclose an apparatus having a memory 6, signal processor 2 including an interpolator 13. Kuroki et al do not disclose that the user can select an effect. However, it was well known to permit the user of an audio system to select a sound effect. Shimizu is one example of such a system whereby the sound effect of a system can be selected by the user via switches 2 and 3. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to give the user the ability to select his/her own sound effect. This feature is advantageous because it increases the flexibility of the system.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroki et al. Kuroki et al disclose an apparatus and method for simulating an audio effect processor comprising selecting an impulse response in response to the characteristic of an input signal and applying that impulse response to the input signal. However, Kuroki et al not disclose simulating a plurality of different audio processors and means for storing a plurality of impulse responses. However, the duplication of parts has no patentable significance. See, In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). The addition of a plurality of audio processors and memories associated with impulse responses is obvious because the addition does not produce a new and unexpected result.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (703) 305-9509. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Brian Tyrone Pendleton
May 2, 2002

FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER
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